PATENT

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re application of:	Williams, et al.	)
Serial No:	09/768,975	) Art Unit 2653
Filed:	January 23, 2001	)
For:	A DUAL STAGE, HEAD STACK ASSEMBLY FOR A DISK DRIVE	)
Examiner:	Blouin, Mark	)
Attorney Docket:	Q01-1000-US1 / 11198.52	)

DECLARATION OF STEPHEN P. WILLIAMS PURSUANT TO 37 C.F.R. 1.131

I, Stephen P. Williams, declare as follows:

1. At all relevant times herein, I was employed as a Design Engineer by Quantum Corporation ("Quantum") and/or Maxtor Corporation ("Maxtor"). On information and belief, the disk drive division of Quantum was acquired by Maxtor in approximately April 2001, after which point I began to work for Maxtor. I have knowledge of the facts contained herein, and if called as a witness, could and would competently testify thereto.

2. On information and belief, Albert Hartman, Thomas Tacklind and I are co-inventors of the present invention that is encompassed within U.S. Patent Application Serial No. 09/768,975 (the "Present Application"). At least prior to August 29, 2000, I was personally on the engineering team that conceived of in the United States, and further developed various embodiments of the concepts included in the Present Application, including construction of a prototype, prior to August 29, 2000.

3. Among the concepts which the co-inventors and I conceived of and participated in constructing prior to August 29, 2000, are one or more embodiments of:

a. A head stack assembly for a disk drive that includes an actuator arm; a coarse positioner that moves the actuator arm relative to the storage disk; a transducer assembly including a load beam, a flexure secured to the load beam, and a data transducer secured to the flexure; a separately formed base plate securing the transducer assembly to the actuator arm, the base plate including (i) one or more edges, (ii) a pair of flex sections that cantilever away from at least one of the edges, the flex sections allowing the base plate to flex, and (iii) a pair of spaced apart positioner cavities that are positioned between the flex sections; and a fine positioner secured to the base plate, the fine positioner being positioned in the positioner cavities, the fine positioner moving a portion of the base plate relative to the actuator arm;

b. A disk drive including an actuator arm; a transducer assembly including a load beam and a data transducer coupled to the load beam; a separately formed base plate that secures the transducer assembly to the actuator arm, the base plate including a flex section that allows the base plate to flex; and a fine positioner that is secured to the base plate so that the fine positioner does not contact the flex section, the fine positioner selectively flexing at least a portion of the base plate;

c. A disk drive including an actuator arm; a transducer assembly including a load beam and a data transducer coupled to the load beam; a separately formed base plate that secures the transducer assembly to the actuator arm; and a first piezoelectric motor having a proximal end and a distal end, that ends being secured to the base plate so that the first piezoelectric motor is under compression, the first piezoelectric motor moving a portion of the base plate relative to the actuator arm;

d. A disk drive including an actuator arm; a transducer assembly including a load beam and a data transducer coupled to the load beam; a separately formed base plate that secures the transducer assembly to the actuator arm, the base plate including a plate mount that secures the base plate to the actuator arm; and a pair of piezoelectric motors that are each secured to the base plate between the plate mount and the data transducer, the

piezoelectric motors being substantially parallel to each other, the piezoelectric motors moving a portion of the base plate relative to the actuator arm;

e. A disk drive including an actuator arm; a transducer assembly including a load beam and a data transducer coupled to the load beam; a separately formed base plate that secures the transducer assembly to the actuator arm, the base plate including a positioner cavity that extends through the base plate; and a fine positioner that is secured to the base plate so that the fine positioner is positioned over at least a portion of the positioner cavity, the fine positioner selectively flexing at least a portion of the base plate;

f. A method for increasing the positioning accuracy of a disk drive including the steps of securing a transducer assembly to an actuator arm with a separately formed base plate having a flex section that flexes; securing a fine positioner to the base plate so that the fine positioner is not in contact with the flex section; and flexing the flex section with the fine positioner to cause at least a portion of the base plate to move relative to the actuator arm; and

g. A disk drive including an actuator arm; a data transducer; a load beam that is coupled to and supports the data transducer, the load beam having a thickness; a base plate that secures the load beam to the actuator arm, the base plate having a thickness that is at least approximately three times the thickness of the load beam, the base plate including a flex section that allows the base plate to flex; and a fine positioner that is secured to the base plate so that the fine positioner does not contact the flex section, the fine positioner selectively flexing at least a portion of the base plate.

4. As proof of the construction of these embodiments prior to August 29, 2000, attached hereto as Exhibit "A" are true and correct copies of four enlarged photographs of one or more prototypes of at least one embodiment of the relevant portion of the invention, which were constructed on behalf of Quantum prior to August 29, 2000.

I declare that the facts set forth in this declaration are true; and that all statements made on my own knowledge are true and all statements made on information and belief are believed to be true; and further, that these statements were made with the knowledge that willful, false statements and the like so made are punishable by fine or imprisonment or both, under Section 1001 of Title 18 of the United States Code and that such willful, false statements may jeopardize the validity of the application or any patent issuing therefrom.

Executed on this 9th day of September, 2004, in Milpitas, California.

STEPHEN P. WILLIAMS

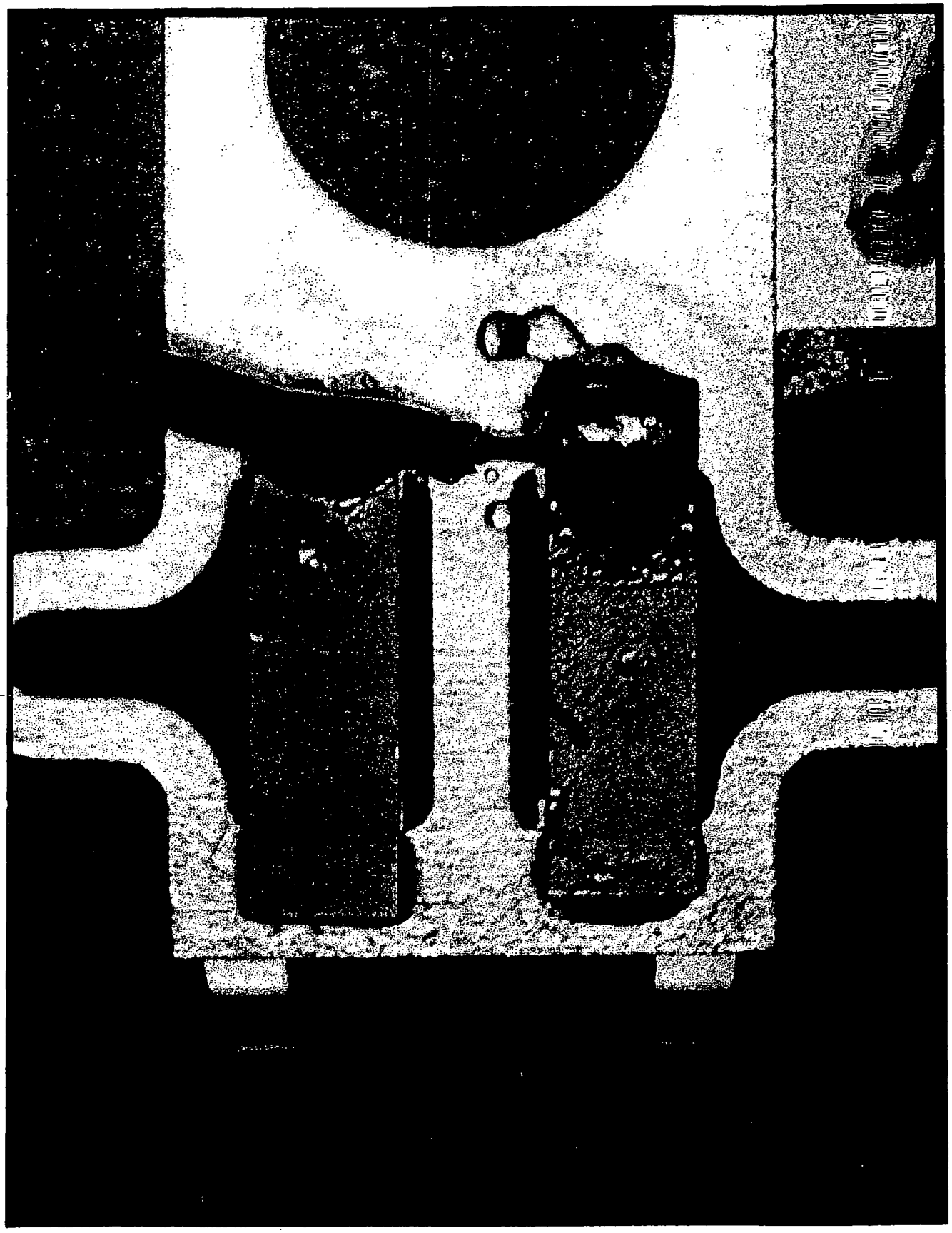
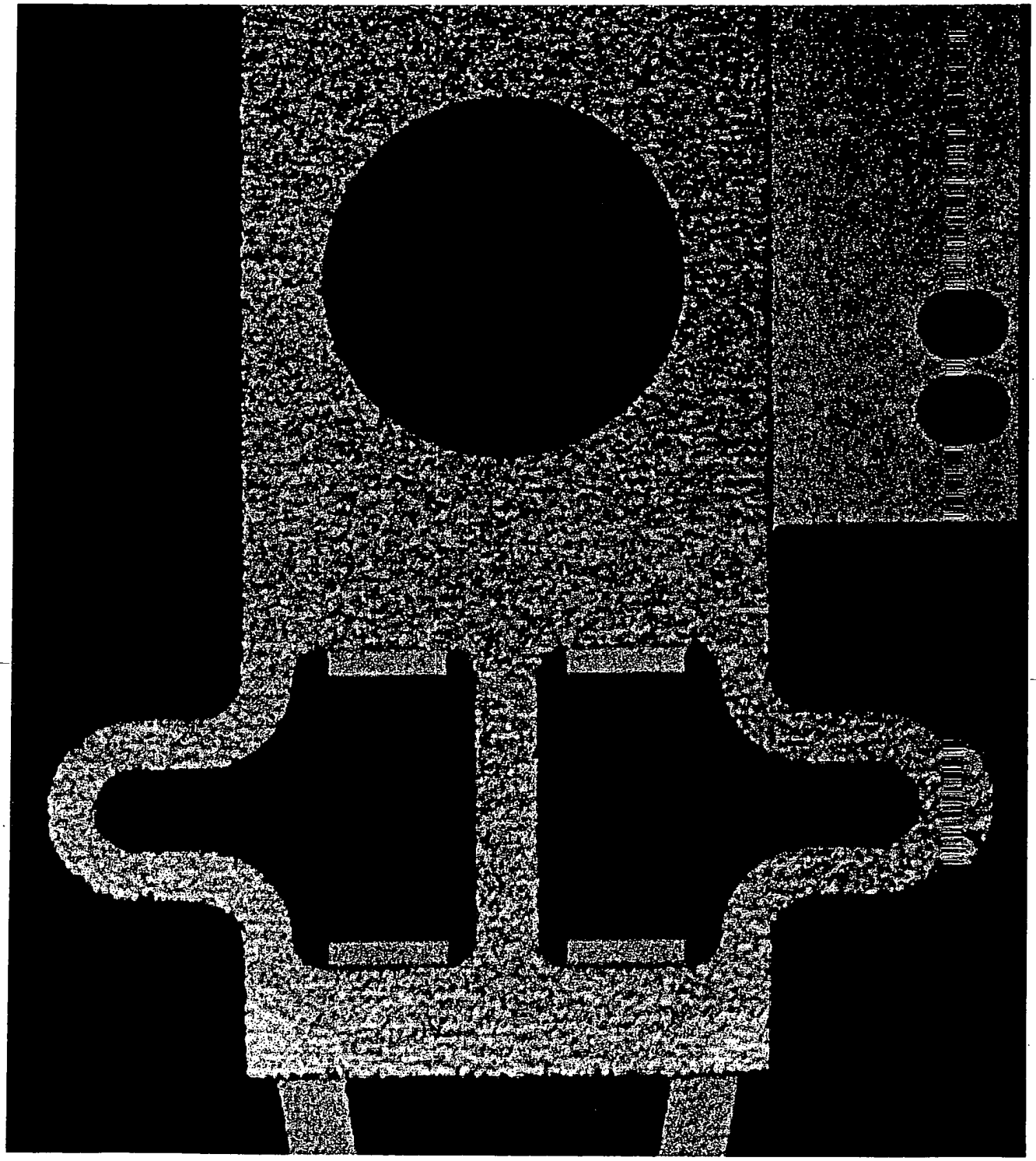
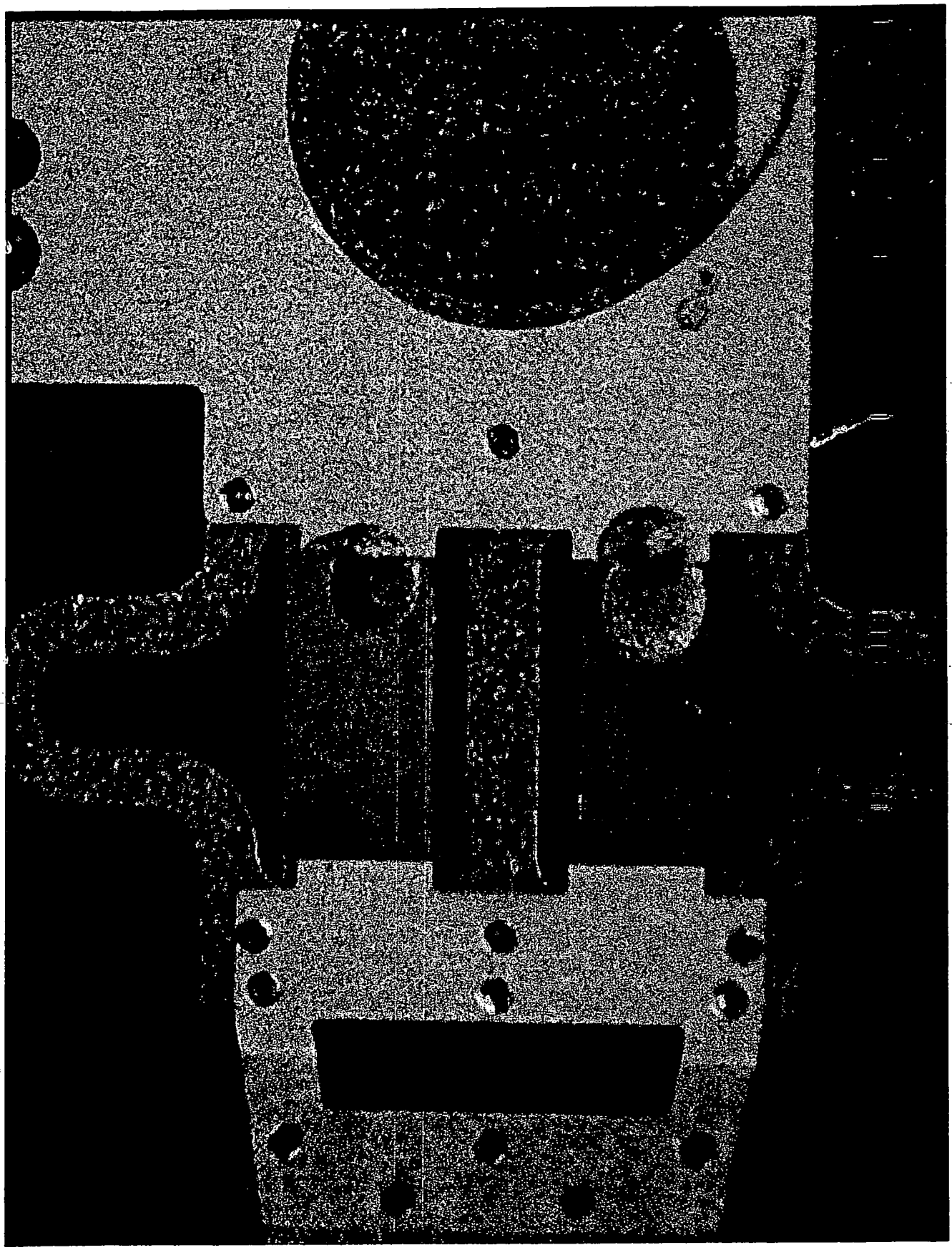


EXHIBIT "A"





This Page is Inserted by IFW Indexing and Scanning Operations and is not part of the Official Record

BEST AVAILABLE IMAGES

Defective images within this document are accurate representations of the original documents submitted by the applicant.

Defects in the images include but are not limited to the items checked:

- ☐ BLACK BORDERS
- ☐ IMAGE CUT OFF AT TOP, BOTTOM OR SIDES
- ☐ FADED TEXT OR DRAWING
- ☒ BLURRED OR ILLEGIBLE TEXT OR DRAWING
- ☐ SKEWED/SLANTED IMAGES
- ☐ COLOR OR BLACK AND WHITE PHOTOGRAPHS
- ☐ GRAY SCALE DOCUMENTS
- ☐ LINES OR MARKS ON ORIGINAL DOCUMENT
- ☐ REFERENCE(S) OR EXHIBIT(S) SUBMITTED ARE POOR QUALITY
- ☐ OTHER: _____

IMAGES ARE BEST AVAILABLE COPY.
As rescanning these documents will not correct the image problems checked, please do not report these problems to the IFW Image Problem Mailbox.